

REMARKS

Office action summary

Claims 1-30 are pending in the present application. No claims are presently amended, added, or canceled. The following rejections were made in the office action of April 26, 2010 (“Office Action”):

- Claims 1-5, 7-21, and 23-30 were rejected under 35 USC § 103(a) as being unpatentable over Farrington, US Patent 4,941,011 (“Farrington”), in view of Yamada, US Patent Application Publication 2002/0090145 (“Yamada”).
- Claims 6 and 22 were rejected under 35 USC § 103(a) as being unpatentable over Farrington in view of Yamada, and further in view of Omura, US Patent 5,943,515 (“Omura”).

The rejections are discussed below. The examiner is respectfully urged to reconsider the application and withdraw the rejections. Should the examiner have any questions or concerns that might be efficiently resolved by way of a telephonic interview, the examiner is invited to call applicants’ undersigned attorney, Jon M. Isaacson, at **206-332-1102**.

Telephonic interview

On June 2, 2010, applicants’ undersigned attorney, Examiner Gebriel, and Examiner Ho conducted a telephonic interview. Applicants’ undersigned attorney would like to thank the examiners for granting the interview. During the interview, applicants’ arguments with respect to the rejections under 35 USC § 103(a) were discussed. The examiners agreed to withdraw the rejection in light of applicants’ arguments, and indicated that a further search would be performed. Any further substance of the interview is incorporated into the remarks below.

Rejections under 35 USC § 103

Claim 1 stands rejected under 35 USC § 103(a) as being unpatentable over Farrington in view of Yamada. Claim 1 is generally directed to “[a]n electronic camera” which comprises “an exposure control unit.” As recited by claim 1, the “exposure control unit is adapted to: integrate the level of light energy sensed during image capture, illuminate said flash unit during said image

capture responsive to the integrated level of light energy reaching a first predetermined level, and extinguish said flash unit and close said scanning aperture shutter unit responsive to the integrated level of light energy reaching a second predetermined level.” Thus, the exposure control unit recited by claim 1 “is adapted to... illuminate [a] flash unit during...image capture responsive to the integrated level of light energy reaching a first predetermined level” and “is adapted to... extinguish said flash unit and close [a] scanning aperture shutter unit responsive to the integrated level of light energy reaching a second predetermined level.”

The Office Action cites to Farrington, col. 7 lines 21-53, as allegedly teaching the exposure control unit recited by claim 1. (Office Action, pages 3-5.) That portion of Farrington discusses an “exposure control electronics module 48 [which] triggers the flash tube 42...at a subject reflectivity related time t_1 to illuminate the scene being photographed with artificial light and then triggers the thyristor 44 at time t_2 through the path 50 to thereby extinguish the light output of the flash tube 42.” (Farrington, col. 7, lines 25-31.) Farrington also describes that “[t]he flashtube 42 is fired at full output at the subject distance related time t_1 , and is extinguished at the time t_2 which will enable the flashtube 42 to provide a predetermined percentage...of the total scene illumination.” (Farrington, col. 7, lines 35-39.) Thus, Farrington teaches illuminating a flash tube at a time t_1 which is “a subject reflectivity related time” and a “subject distance related time” and then extinguishing flash tube at a time t_2 such that the flash tube provides “a predetermined percentage...of the total scene illumination.”

In the portion cited by the Office Action, Farrington also describes that a visible frequency sensor senses the visible light from time an aperture starts to open until the time t_1 , and also senses the visible light from the time t_2 until the end of the exposure. (Farrington, col. 7 lines 42-46.) Farrington further describes that a non-visible frequency sensor senses the non-visible light between the times t_1 and t_2 . (Farmington, col. 7 lines 46-50.) Farrington also describes that the sensed values from the visible frequency sensor and the non-visible frequency sensor “are sequentially integrated and their integrated values stored by the track and hold system 52.” For the reasons that follow, applicants respectfully submit that these portions of Farrington fail to teach or suggest the following recitations of claim 1: (1) an exposure control unit “adapted to... illuminate [a] flash unit during...image capture *responsive to the integrated level*

of light energy reaching a first predetermined level” (emphasis added); and (2) an exposure control unit “adapted to...extinguish said flash unit and close [a] scanning aperture shutter unit *responsive to the integrated level of light energy reaching a second predetermined level*” (emphases added).

First, Farrington fails to teach or suggest an exposure control unit “adapted to... illuminate [a] flash unit during...image capture *responsive to the integrated level of light energy reaching a first predetermined level*” (emphasis added), as recited by claim 1. As noted above, Farrington describes an exposure control electronics module which triggers a flash tube at a time t_1 , and integrating the visible light sensed before the time t_1 . Farrington does not teach that the triggering of the flash tube is responsive to an integration value reaching a certain level; instead, Farrington teaches that the time t_1 is “a subject reflectivity related time” and a “subject distance related time.” Thus, Farrington teaches triggering a flash tube at a time t_1 where the time t_1 is determined based on subject reflectivity and subject distance. While Farrington also teaches integrating the light sensed before the time t_1 , nothing in Farrington teaches or suggests that the time t_1 is determined based on the integrating of the light sensed before the time t_1 . Therefore, Farrington fails to teach or suggest an exposure control unit “adapted to... illuminate [a] flash unit during...image capture *responsive to the integrated level of light energy reaching a first predetermined level*” (emphasis added) as recited by claim 1.

Second, Farrington fails to teach or suggest an exposure control unit “adapted to...extinguish said flash unit and close [a] scanning aperture shutter unit *responsive to the integrated level of light energy reaching a second predetermined level*” (emphasis added), as recited by claim 1. As noted above, Farrington describes an exposure control electronics module which extinguishes a flash tube at a time t_2 , and integrating the non-visible light sensed before the time t_2 and the visible light sensed after the time t_2 . Farrington does not teach that the extinguishing of the flash tube is responsive to an integration value reaching a certain level; instead, Farrington teaches that the time t_2 is determined such that the flash tube provides a predetermined percentage of the total scene illumination. Thus, Farrington teaches extinguishing a flash tube at a time t_2 where the time t_2 is determined based on non-visible light providing a certain percentage of total scene illumination. While Farrington also teaches integrating the light sensed before and after the time t_2 , nothing in Farrington teaches or suggests that the time t_2 is determined based on the

integrating of the light sensed before the time t_2 . Therefore, Farrington fails to teach or suggest an exposure control unit “adapted to...extinguish said flash unit and close [a] scanning aperture shutter unit *responsive to the integrated level of light energy reaching a second predetermined level*” (emphasis added) as recited by claim 1.

For the foregoing reasons, applicants respectfully submit that Farrington fails to teach or suggest the exposure control unit recited by claim 1. The Office Action does not cite to Yamada as teaching the exposure control unit recited by claim 1, and applicants respectfully submit that Yamada does not teach the recited exposure control unit. Therefore, Farrington and Yamada, individually and collectively, fail to teach or suggest the recitations of claim 1. Accordingly, applicants respectfully request withdrawal of the rejection of claim 1 under 35 USC § 103(a).

Claims 8, 12, 17, 24, 28, 29, and 30 stand rejected under 35 USC § 103(a) as being unpatentable over Farrington in view of Yamada. While different in scope from claim 1, each of claims 8, 12, 17, 24, 28, 29, and 30 contain recitations similar to those recitations of claim 1. For at least those reasons that Farrington and Yamada fail to teach or suggest the recitations of claim 1, applicants submit that Farrington and Yamada, individually and collectively, fail to teach or suggest the recitations of claims 8, 12, 17, 24, 28, 29, and 30. Accordingly, applicants respectfully request withdrawal of the rejections of claims 8, 12, 17, 24, 28, 29, and 30 under 35 USC § 103(a).

Claims 2-7, 9-11, 13-16, 18-23, and 25-27 depend, directly or indirectly, from claims 1, 8, 12, 17, and 24. Inasmuch as claims 2-7, 9-11, 13-16, 18-23, and 25-27 depend from claims whose recitations are not taught or suggest by the cited art, as discussed above, applicants submit that the recitations of claims 2-7, 9-11, 13-16, 18-23, and 25-27 are not taught or suggest by the cited art. Accordingly, applicants respectfully request withdrawal of the rejections of claims 2-7, 9-11, 13-16, 18-23, and 25-27 under 35 USC § 103(a).

Conclusion

Applicants believe that the present remarks are responsive to each of the points raised by the examiner in the Office Action, and submit that claims 1-30 of the application are in condition for allowance. Favorable consideration and passage to issue of the application at the examiner's earliest convenience is earnestly solicited.

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